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Notice:

Please read the following words before assembling and using this monitor.

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CE certificate

This shipped version of this device complies with the requirements of the EEC directive 89/336/EEC "Electromagnetic compatibility" and 73/23/EEC "Low voltage directive".

FCC Class B Radio Frequency Interference Statement
WARNING: (FOR FCC CERTIFIED MODELS)

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

NOTICE:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.

WARNING:

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

PRECAUTIONS

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable cart, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a cart or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Cut off the power source during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself, opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel.
- The wall socket shall be installed near the equipment and shall be easily accessible.

SPECIAL NOTES ON LCD MONITORS

The following symptoms are normal with LCD monitor and do not indicate a problem.

NOTES

- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power for hours.

BEFORE YOU OPERATE THE MONITOR

FEATURES

- 48cm(19") TFT Color LCD Monitor
- Optimal Resolutions is 1440 X 900 @60Hz
- Low Power Consume & Power Saving Design
- Ergonomic Design
- Space Saving, Compact Case Design

CHECKING THE CONTENTS OF THE PACKAGE

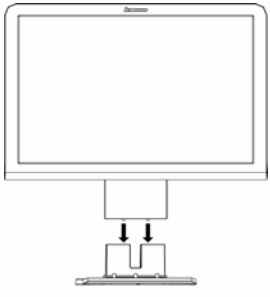
The product package should include the following items:

1. LCD Monitor
2. Owner's Manual
3. Power cord
4. Signal Cable

INSTALLATION INSTRUCTIONS

SWIVEL BASE

Install



Remove

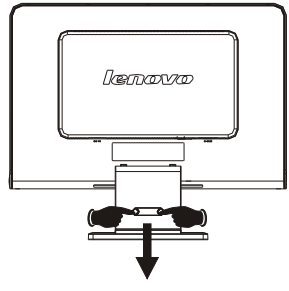


Figure 1 Installing and Removing the Base

CONTROLS AND CONNECTORS

Power cord

Connecting the power cord: Connect one end of the power cord to the LCD Monitor's power input socket and the other end to the 220V power supply socket.

SIGNAL CABLE

Connecting the Signal Cable: Connect one end of the 15-pin D-Sub cable to the back of the LCD monitor and connect the other end ot the computer's D-Sub port.

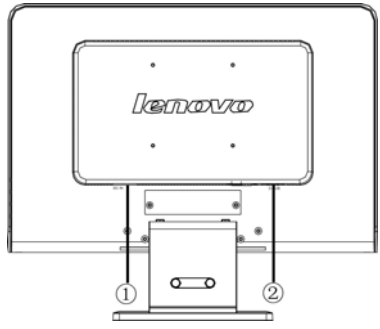


Figure 2 Connecting Cables

1.	Power cord	2.	Signal Cable

ADJUSTING THE VIEWING ANGLE

- For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.
- Hold the stand so you do not topple the monitor when you change the monitor's angle.
- You are able to adjust the monitor's angle from -5° to 20°.

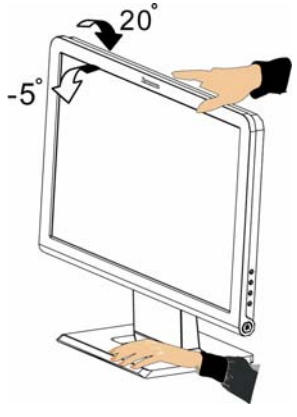


Figure 3

NOTES

- Do not touch the LCD screen when you change the angle. It may cause damage or break the LCD screen.
- Careful attention is required not to catch your fingers or hands when you change the angle.

OPERATING INSTRUCTIONS

GENERAL INSTRUCTIONS

Press the power switch to turn the monitor on or off. The other control knobs are located at right side of the monitor (See Figure 4). By changing these settings, the picture can be adjusted to your personal preferences.

- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor. The power indicator will light up.

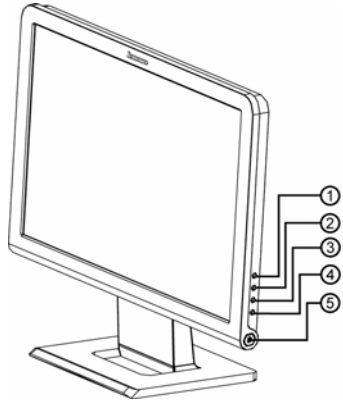


Figure 4 External Control Button

EXTERNAL CONTROLS

1.	Auto Config / Exit	2.	Brightness/▲
3.	Multi-Hue function hot key/▼	4.	MENU / ENTER
5.	Power / Power indicator		

PANEL CONTROL

- **Power:**
  Press this knob to switch ON/OFF of monitor's power.
- **MENU/ENTER:**
  Activate OSD menu or function adjusts confirmation.
- **LENOVO Multi-Hue Function Hot Key:**
  Go into Multi-Hue mode.
- **Brightness :**
  Adjust brightness or function adjustment.
- **Auto Config Key / EXIT:**
  1. When OSD menu is in active status, this knob will act as EXIT-KEY (EXIT OSD menu).
  2. When OSD menu is in off status, press this knob over 1 seconds to be in Auto Adjustment function.
     The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus automatically.

- **Power indicator :**
  Blue — Power On mode.
  Orange — Power Off mode.

NOTES

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the LCD clean, periodically clean it with a soft cloth. Any kind of liquids will damage the LCD.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

HOW TO USE OSD

The main menu will be displayed as follows (see figure 5). If OSD window is in Chinese when power on, press ▲ or ▼ to choose the next window. Choose the English, then press MENU Key. for confirming. OSD window will display in English.

1. Press the MENU-Key. to show the OSD window. See figure 5.
2. Press ▲ or ▼ to select the adjusted item, then press the MENU-key.
3. Press ▲ or ▼ to change the settings of selected item. Press MENU-key. when desired setting is done.
4. If you want to adjust any other items, repeat steps 2-4.
5. To exit and save the setting, press ▲ or ▼ to the exit item and press MENU-key, or leave the monitor alone for 10 seconds.
6. When the OSD window is active, it shows the input signal timing.

Figure 5 English OSD Message

ADJUSTING THE PICTURE

The description for function control LEDS

1. BRIGHTNESS & CONTRAST

   1.1 BRIGHTNESS

   Adjust the picture brightness.

   1.2 CONTRAST

   Adjust the picture contrast.

2. ADJUST POSITION

   2.1 HORIZONTAL POSITION

   Adjust the horizontal position of the picture.

   2.2 VERTICAL POSITION

   Adjust the vertical position of the picture.

3. VIDEO NOISE

   3.1 FOCUS

Adjust the picture Focus.

3.2 CLOCK

Adjust the picture Clock.

4. LANGUAGE

Multi-Language selection.

5. OSD TIMER

Choose OSD window display time.

6. COLOR TEMPERATURE

6.1 7800K/6500K (COLOR TEMPERATURE)

The color temperature for 7800K is x=0.296, y=0.311 and 6500K is x=0.313, y=0.329. It presents two different color sets on the screen. You can select 7800K or 6500K by pressing MENU Key.

6.2 USER MODE (Red / Green/ Blue)

If the 7800K normal white or 6500K warmer white do not satisfy your desire, properly adjust R .G. B GAIN controls to obtain your optimum whiteness level.

7. OSD POSITION

7.1 HORIZINTAL OSD

Adjust the horizontal position of the OSD Menu.

7.2 VERTICAL OSD

Adjust the vertical position of the OSD Menu.

8. LENOVO MULTI-HUE Function:

This function allows the selection of different display color representation modes.
Modes available include: Text, Web & Graphics and Movie. Text mode is recommended for text editing and other office applications; Web & Graphics is recommended for visiting the Internet or browsing pictures; Movie modei s recommended for watching video or gaming. To learn more about this function, use the Multi-Hue display modes and cycle through them to compare their actual effects.

9. EXIT OSD

Close OSD window.

9. RESET

Press RESET to restore the monitor to factory settings.

Green monitor

- The monitor has a power saving function that conforms to the VESA standard. When the computer input no signal, the monitor will enter the shuts off mode.

The power-saving mode can be indicated by the light-emitting diode (LED) on the right side:

Mode	Signal		Power	
	Cable	Picture	Indicator	Consumption
On	Attached	Active	Blue	≤ 42 W
Off	Attached	Shutdown	Orange	≤ 1 W

PLUG AND PLAY

Plug & Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bidirectional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

TECHNICAL SUPPORT (FAQ)

Problem & Question	Possible Solution
Power LED is not on	*Check if the Power Switch is in the ON position *Power Cord should be connected *Check the Power socket. *Replace new Power Cord.
No picture, the LED indicator is light up	*The Signal Cable should be completely connected to the computer. *If it is orange, then the monitor and the computer are in dormancy mode. You need press your keyboard or move the mouse to reactivate the system. *If it is blue, please adjust the brightness and contrast by OSD menu. *Check that the computer is switched on. *Check that the signal's pin are bent or broke.
Picture is gray	*adjust the brightness and contrast controls.
Picture bounces or a wave pattern is present in the picture	*Move electrical devices that may cause electrical interference.
Picture is fuzzy	*19" LCD monitor's true (physical) resolution is 1440 x 900. Under the resolution, it will get the best display.
Missing one of the primary colors (RED, GREEN, or BLUE)	*Inspect the monitor's video cable and make sure that none of the pins are bent or broke (the pin's number reference to figure 6)
Screen image is not centered or sized properly.	*Adjust pixel frequency (CLOCK) and FOCUS or press hot-key (AUTO).
Picture has color defects (white does not look white)	*Adjust RGB color or select color temperature
Poor brightness or contrast	*When the brightness of the screen lowers after being used for a certain period and the function of the display is affected, send it to our authorized service center for repair.
Horizontal or vertical disturbancies on the screen	*Use Win 95/98/2000/ME shutdown mode Adjust CLOCK and FOCUS or perform hot- key (AUTO-key).

CLOCK (pixel frequency) controls the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the picture has not correct width.

FOCUS adjust the phase of the pixel clock signal. With a wrong phase adjustment the picture has horizontal disturbances in light picture.

For FOCUS and CLOCK adjustment use Win 95/98/2000/ME shutdown mode pattern.

ERROR MESSAGE & POSSIBLE SOLUTION

NO SIGNAL INPUT

1. The computer is switched off.
2. The computer is dormancy.

CABLE NOT CONNECTED :

1. Check that the signal-cable is properly connected, If the connector is loose, tighten the connector's screws.
2. Check the signal-cable's connection pins for damage.

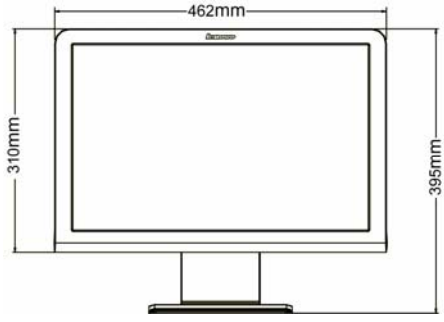
INPUT THE RESOLUTION OUT OF THE RANGE:

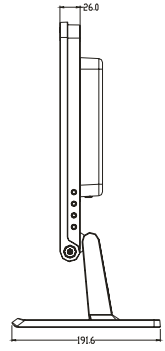
Your computer has been set to unsuitable display mode, Set the computer to display mode given in the following table.

APPENDIX A

SPECIFICATIONS

LCD Panel	Type	TFT Color LCD
	Size	48cm(19")
	Pixel pitch	0.285mm(H) x 0.285mm(V)
Input	Video	R,G,B Analog Interface
	Separate Sync.	H/V TTL
	H-Frequency	30kHz - 80kHz
	V-Frequency	50Hz-75Hz
Display Colors		16.2M Colors
Dot Clock		137MHz
Max. Resolution		1440 x 900
Plug & Play		VESA DDC2B™
Input Connector		D-Sub 15pin
Input Video Signal		Analog:0.7Vp-p(standard), 75 OHM, Positive
Maximum Screen Size		Horizontal : 410mm Vertical : 256mm
Power Source		100~240VAC,50/60Hz
Environmental Considerations		Operating Temp.: 0°C to +40°C (32°F to 104°F) Storage Temp.: -20°C to 60°C (-4°F to 140°F) Operating Humidity : 10% to 85%
Weight (N. W.)		5.2kg
Power Consumption		42 Watts
Regulatory Compliance		cULus; CB；TUV-GS；CCC； CE；SASO; SABS; FCC Doc ; VCCI;TCO'99; ISO13406-2





APPENDIX B

FACTORY PRESET TIMING TABLE

STANDARD	RESOLUTION	HORIZONTAL FREQUENCY	VERTICAL FREQUENCY
Dos-mode	720 × 400	31.47kHz	70.0Hz
VGA	640 × 480	31.47kHz	60.0Hz
	640 × 480	37.50kHz	75.0Hz
SVGA	800 × 600	37.879kHz	60.0Hz
	800 × 600	46.875kHz	75.0Hz
XGA	1024 × 768	48.363kHz	60.0Hz
	1024 × 768	56.476kHz	70.0Hz
	1024 × 768	60.021kHz	75.0Hz
SXGA	1280 × 1024	64.000kHz	60.0Hz
	1280 × 1024	80.000kHz	75.0Hz
WXGA+	1440 × 900	55.935kHz	59.8Hz
	1440 × 900	70.635kHz	74.98Hz

APPENDIX C

CONNECTOR PIN ASSIGNMENT

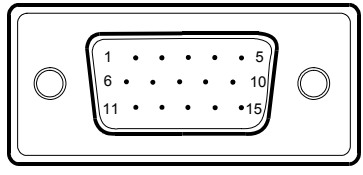


Figure 6 15 - Pin Color Display Signal Cable

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Logic Ground
3.	Blue	11.	Ground
4.	Ground	12.	DDC-Serial Data
5.	Ground	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	SCL
8.	B-Ground		